Journal of the Society of Arts.

*FRIDAY, NOVEMBER 7, 1856.*

## CLASS BOOKS FOR INSTITUTIONS.

The following letter has been received from the Secretary to the Committee of Council on Education :—

"Education Department, Downing-street,
"London, Oct. 30th, 1856.

"SIR,—In pursuance of the letter from this office of the 15th instant, I have the honour to enclose copies of—

"1. An explanatory circular.
"2. A form of preliminary return.
"3. A form of application,

adapted specially to the classes of instruction which are connected with Mechanics' Institutes.

"My Lords will undertake to send copies of these documents to the correspondents of the Institutes in connection with your Society, if you will have the goodness to furnish me with a list of the names and addresses.

"I have the honour to be, Sir,
"Your obedient servant,
"R. R. W. LINGEN."

"P. Le Neve Foster, Esq.,
"Society of Arts, Adelphi."

The following is the explanatory circular alluded to, and is addressed to the Managers of all the Institutions in Union with the Society of Arts :—

"Education Department,
"Privy Council Office, Downing-street.

"GENTLEMEN,—In compliance with a request received from the Society of Arts, I am directed by the Committee of Council on Education to afford to your Institution an opportunity of obtaining the books, maps, and diagrams enumerated in the accompanying schedule, at the reduced prices therein specified.

"In determining the works to be put upon the list, my lords reserved to themselves the liberty of rejecting any work which by its subject matter did not appear to them to be suitable for *elementary instruction in school;* but they have not gone further than this into the merits of any particular work.

"The difficulty of school managers does not consist in providing the means of reference to works of comparatively expensive character, but in putting *class-books into the hands of each scholar, and furnishing the school with large maps and diagrams for class-teaching.* It is to such works, and to suitable text-books for masters and assistants, that my lords desire to confine the list.

"Those books which are thought to be more suitable to teachers than to ordinary scholars are distinguished by an asterisk.

"You will observe that the point of view from which my lords are able to regard your Institute as falling within the scope of the Committee of Council on Education is *the means which it affords for regular and systematic instruction at prescribed times, under regularly attending teachers.* Their lordships are well aware that this instruction forms only a part of the public service which you are endeavouring to render, nor do they undervalue the importance of those occasional lectures by persons of special qualification, nor those opportunities for individual reading and study, which your Institute affords to its members. Such parts of your system, however, suppose adults educated, or capable of educating themselves, suitably to their condition in life, and are properly left to independent local action. But in order to create this educated class, or this class capable of perfecting its own education, former short-comings of instruction must be made good by steady application under competent teachers. *In this respect, you are promoters of schools,* though not altogether of the common kind; and in this respect my lords are anxious to place at your service all those parts of their machinery which you can use without departing from the ground of self-support—a principle never to be lost sight of where adults chiefly are concerned.

"In troubling you to fill up the form* which accompanies this letter my lords have two principal objects in view. First, they wish to bring "classes for instruction" into prominence as an integral part of the work of a Mechanics' Institute, and to fix the attention of the managers upon the details of such classes. Next, although the return may, in the first instance, often be little more than a rough and imperfect estimate, their lordships wish to suggest the propriety of keeping accurate records, as the basis of a valuable body of information. The Census of 1861 may be expected to embrace education among its objects, but it can only do so with complete effect if due preparation be made by the promoters of education beforehand.

"The prices entered in the schedule are, upon an average, 40 per cent. below the ordinary retail prices. The power of purchasing through the medium of the Committee of Council gives your Institute the full benefit of this reduction on the part of the publishers. The only cost beyond that of the works themselves will be the carriage of the parcel from London.

"*No applications can be entertained oftener than once in each year, nor in respect of books, maps, and diagrams costing less than £3.*

"The managers may, at their discretion, retain the works as the property of the Institution, allowing the teachers and scholars to have the use of them, or they may sell them again to such teachers and scholars at any price not exceeding that named in the schedule.

"The Committee of Council strongly recommend that the scholars be encouraged to purchase in this manner *for themselves* such works as the teachers may direct to be used.

"If, as managers of the Institute, you desire to obtain books, maps, and diagrams through the agency of the Committee of Council, you will be so good as to write to this office for the form of an "*Application to purchase,*" and to enclose in your letter a copy of your rules and of your last published report, together with a return in the accompanying form.

"If the form can be filled up, my lords will be glad to receive it; but if the form cannot be filled up without considerable inconvenience, it may be omitted, and the other documents will, for the present, suffice. My lords hope, however, that the importance of being able at all times to make exact returns will not be lost sight of by the managers of these classes.

"I have the honour to be, Gentlemen,
"Your obedient servant,
"R. R. W. LINGEN.

"To the Committee of Management
of the above-named Institute."

## EXAMINERS' REPORT.

SUBJECTS AND SUGGESTIONS FOR CANDIDATES IN JUNE, 1857.

The Board of Examiners, at the request of the Council of the Society of Arts, have drawn up the following instructions, suggestions, and recommendations for the use of those persons who propose to present themselves for examination before the Society's Examiners.

The text-books mentioned in the following pages are sanctioned by the Board of Examiners.

* This form is for the purpose of obtaining certain statistical details of the Institution and its classes.—ED. S. A. J.

### MATHEMATICS.

The Examiners in Mathematics recommend that the mathematical course should comprise:—

Arithmetic.

Knowledge of the principles of a decimal currency on the basis of the pound unit.

Book-keeping by double entry.

Algebra, including Quadratic Equations, and the Theory and Application of Logarithms. Elements of Euclid, books I., II., III., and VI., XI. (first 21 propositions), and XII. (first 10 propositions).

Mensuration.

Plane and Spherical Trigonometry, with the solution of both plane and spherical triangles by the use of Logarithmic Tables.

Land Surveying.

Nautical Astronomy.

The properties of Conic Sections treated geometrically or graphically, by the method of projections.

The Examiners do not attach much importance to the selection of the manuals in which mathematics may be learned. Such text-books as those of Colenso, or Barnard Smith in Arithmetic and Algebra, the Arithmetic and Trigonometry of the Society for the Promotion of Christian Knowledge, "Mathematical Tables" (*Chambers' Educational Course*), and the "Elements of Descriptive Geometry" (*J. W. Parker, Strand*), may be recommended. The Examiners will consider of no moment a familiarity with technical rules, got up as exercises of the memory. A knowledge of the principles involved in the subjects of examination, and a facility in applying them to particular cases, will alone be valued.

They strongly recommend students, who take an interest in the practical applications of Geometry, to master the principal propositions in the Eleventh and Twelfth Books of Euclid.

The Examiners desire to impress on the notice of the candidates, the importance of making themselves acquainted with methods of investigation and principles. They believe that much valuable time is lost over curious problems, which have nothing to recommend them but their difficulty, and in solving Algebraical equations, which require nothing but expertness in manipulating symbols.

The Examiners are of opinion, that a candidate, by directing the course of his reading this way, with no greater expenditure of time than at present is given to acquiring a knowledge of the rudiments of Mathematics, might obtain some acquaintance with the principle of Duality, learn something of the method of Poles and Polars, of Transversal Lines, and acquire some familiarity with the elementary principles of solid and descriptive Geometry, and of the methods of Projection applied to derive the principal proportions of the Conic Sections from the circle. To solve algebraical equations or geometrical problems is seldom required in the business of practical life. The Examiners will be prepared to test the candidates by an examination conducted in principles and methods which may be obtained by careful reading, rather than by setting curious puzzles, to tax the ingenuity of the candidate.

### PHYSICS.

The Examiners in Mechanics would particularly direct the attention of Candidates to the importance of obtaining a clear knowledge of the general principles on which all machines must be constructed. They are of opinion that this knowledge, though at first it may seem abstract, will in the end prove of far more value to the intelligent engineer than any early familiarity with the construction or working of individual machines. When the mind once lays fast hold of a general principle, it becomes a very easy matter to apply it as circumstances may arise. The uninstructed workman, after the familiarity, it may be, of years with the working of machinery in motion, comes at last to gather the general principle from a life-long induction of particulars. He invents for himself a theory of mechanics. Had he been properly instructed, he might have started where he ends. The Examiners will endeavour to test the Candidates' knowledge of general principles applied to the construction of ordinary and familiar machines.

The Examiners in Physics desire to direct the attention of Candidates to the Study of the Properties of Heat, a knowledge of which is of so much importance to the right understanding of the action of the great motive power Steam, the construction of furnaces, and the economical consumption of fuel. The principles involved in the theory of Hydrostatics are of daily practical application. Indeed, there is no knowledge of a general principle, or acquaintance with a particular physical fact that may not sometime or other be turned to account.

The Examiners in Mechanics and in the Natural Sciences recommend that the course should comprise:—

The Elements of Statics and Dynamics.

The Principles of Mechanism.

Practical Mechanics.

Hydrostatics.

Pneumatics.

Electricity.

The Theory of Heat, especially with reference to the properties of steam.

The Examiners recommend the separate treatises by Galbraith and Haughton, Lardner's Handbooks of Natural Philosophy, and Brooke's edition of Golding Bird's Elements of Natural Philosophy.

The Examiners desire it to be distinctly understood that they can assign very little value even to correct answers, when unaccompanied by a demonstration, if practicable.

They view the habit of accurate inductive reasoning to be an important secondary advantage accruing from the study of Mathematics and Physics.

### CHEMISTRY.

The Examiners in Chemistry desire to point out for the guidance of students the following books:—Professor G. Wilson's Chemistry (*Chambers' Educational Course*); Fownes' Manual of Chemistry (*Churchill*); Dr. Gregory's Handbook of Chemistry, Organic and Inorganic, 2 vols.: and Professor Miller's Elements of Chemistry.

### AGRICULTURE.

The Examiners in Agriculture recommend the following works to the attention of Candidates:—

Johnson's Agricultural Chemistry.

Morton's Cyclopædia of Agriculture.

British Husbandry. S.D.U.K.

Low's Elements of Practical Agriculture.

Stephens' Book of the Farm.

The Examiners will require such a general knowledge of Farm Practice and the Management of Live Stock as must to some extent at any rate have been obtained in the field.

### POLITICAL AND SOCIAL ECONOMY.

The importance of the knowledge implied under this head, and the very general ignorance which pervades the great mass of the public, as to the application of its principles to the every-day business and the ordinary relations of common life, have induced the Council to recommend to the Board of Examiners to add Political and Social Economy to the list of Subjects for Examination. The phenomena of industrial life, and the obscure but fixed laws which rule the international and social intercourse of men living in communities, have been too much overlooked and disregarded.

The Examiners recommend the following text Books on this subject:—

Adam Smith's Wealth of Nations.

Archbishop Whateley on Value.

Lessons on the Phenomena of Industrial Life, edited by the Dean of Hereford.

GEOGRAPHY.

I. The Examiners recommend that all Candidates for Certificates in Geography should acquire a sufficient stock of systematic information in elementary descriptive geography as a basis, before they proceed to the study of the more scientific branches of the subject. With this view they should qualify themselves to undergo a searching examination in such a book as William Hughes' "Geography for the use of beginners" (*Gleig's Series*). Success in this limited portion of the subject will qualify a Candidate to obtain a Certificate of Competency.

II. To those who already possess a good general knowledge of descriptive Geography, the Examiners suggest, as a special subject for the present year, a thorough study of the Geography of the British Empire and its dependencies.

The student will be expected to acquire, in regard to each part of the British Dominions—

1. An exact and minute acquaintance with its Descriptive and Political Geography.

2. An elementary knowledge, sound as far as it may go, of its Historical Geography.

3. Such acquaintance with its Physical Geography as may bear on the chief natural productions and on the condition of its inhabitants.

Candidates who pass a satisfactory examination in the range of knowledge which has been indicated, will be entitled to a Certificate of Proficiency.

III. The more advanced study of Geography is so extensive in its connexions, that the examiners would recommend candidates to take up some one or two branches of the subject, rather than to pursue a more diffusive course. They consider that a student who has well mastered the elements of Geography, will get most advantage by a careful study of some one of the following sciences, taken strictly in its Geographical relation; that is, *in its bearing on the condition of the human race.*

*a.* Zoology.
*b.* Botany.
*c.* Geology.
*d.* Meteorology.
*e.* Ethnography.

As a special subject for the ensuing examination, the Examiners have fixed on Geology. They will be prepared to award a Certificate of Excellence to any candidate who may add an acquaintance with that science, *considered in its purely geographical relation*, to an extensive and sound knowledge of general descriptive geography.

The Examiners recommend all candidates diligently to study common maps, and to obtain a facility of drawing with clearness and precision, from memory only, maps of the principal countries, seas, and islands of the globe, so as distinctly to show the chief natural features and the situations of the principal towns. They prefer a style of map drawing in which the mountain chains and coast line are neatly and easily indicated, by mere lines, instead of that in which the usual style of engraved maps is imitated, which occupies much more time and possesses no practical advantage.

The following may be named as comprehensive compendiums.

Somerville's Physical Geography, 2 vols.
Guyot's Earth and Man.
William Hughes' Geography, 2 vols.

ENGLISH LITERATURE.

The Examiners in English Literature noticed in the last examination, that some of the candidates sent in a large number of answers to the questions given, some of which were superficial and wanting in accuracy.

To prevent a recurrence of this, it is intended in future to limit the examination of each candidate to any *two* of the authors on the schedule, which he may select for himself.

The examination in these two subjects will be rigid. The scope and tendency of the work under consideration, its peculiarities of style, its relation to contemporary literature, its influence on society, and the biography of its author, will form the basis of the examination. The candidate will also be expected to define the position of the writer in respect to his contemporaries, the probable sources from which he derived his materials, and the influence exerted on him by the age in which he lived. Some knowledge also of the great epochs and divisions of English literature will be required.

An acquaintance with all or the most important of the works of the two authors selected will be *useful;* a thorough knowledge of the two works specified will be *indispensable.*

The Examiners recommend the candidate to pay great attention to the exact meaning of the words of the author he is studying. They would advise him not to shrink from the trouble of registering on paper the more important words in an orderly and systematic manner, or from endeavouring to develop step by step the various meanings in which those words are used, and the chain by which their meanings are bound together.

As there may be some danger that such an exercise, useful as it is, may superinduce a mere love of verbal subtleties, instead of an honest desire of discovering the full meaning of the author, the Examiners think it advisable to vary this exercise with another. They would recommend that by frequent reading and analysis the student should endeavour to master the mind of his author, to understand the order in which the work develops itself, to trace the connection between its several parts, with their relation to each other and to the great end which the author had in view. This, it is true, is not to be accomplished without great labour, but the student has this encouragement, that the insight, however small, which he gains by this method into the mind of a great writer, will be of more value for his own self-improvement than any amount of opinions gained from others, with which he may load his memory.

The following is the course on which the next examination will take place. Chaucer's Prologue to the Canterbury Tales. Spenser's Fairy Queen, First Book. Shakespeare: King John, Henry IV., Hamlet, Macbeth. Bacon: First Book of the Novum Organum in English (*Bohn*); the Advancement of Learning. Milton's Paradise Lost, First Six Books. Dryden: Virgil's Æneid, First Six Books. Spectator. Pope: Homer's Iliad, First Eight Books. Butler's Analogy (*The Religious Tract Society's Edition*), with the Introduction, and the Three Sermons on Human Nature. Wordsworth: Excursion, or Lyrical Ballads. Tennyson.

*Candidates may take up any two, but not more than two of the above authors.*

ENGLISH HISTORY.

Although the Examiners in English History have reason to feel satisfied at the results of the last examination, yet they feel it their duty to offer the following suggestions for the guidance of future Candidates.

I. In commencing the study of English History, it will be advisable for the student to divide the whole subject into epochs. These will be, the Roman, Anglo-Saxon, Norman, Plantagenet, Tudor, Stuart, and Hanoverian. Before he proceeds to examine each of these epochs in detail, he will find it useful to gain *some* information of the countries, races, and people to which they respectively point; and he is to connect these important topics of inquiry with his peculiar historical studies.

II. In studying each of these epochs (if possible, consecutively), he is advised to proportion his attention to their relative importance; and to adopt the same caution in reference to the events and the reigns embraced in each single epoch. Instead of bestowing the same degree of labour on the reign of each single sovereign, he is rather to select the most conspicuous sovereign in each dynasty and each epoch, and take that sovereign's reign

as a guide and illustration for the rest. He is to follow the same rule in every single reign; beginning with studying carefully the great and prominent facts of the reign, considering them as the indices to guide him to the true understanding of the more dubious and obscure. Thus in his historical studies he is to adopt the common rule of prudence, determining minor facts and less important characters by the greater and the more illustrious; not the greater and more illustrious by the more questionable and obscure.

III. Although the examiners think that a special illustration of these remarks is in some measure beyond their province, and might possibly narrow the application of them, yet that their meaning may be more clear, the following details are subjoined:—

Of the various epochs aleady mentioned, 1st, the Roman, divides itself into two. The first period extends from the invasion of Julius Cæsar to the time of Julius Agricola, and is occupied in the subjugation of the island. The second is the civilised Roman period; when Britain became a province like other portions of the Empire. 2ndly. The Anglo-Saxon divides itself into Pagan and Christian. 3rdly. The Norman, ending with Stephen, also is divided into two; the Conquest of England under William, and the union of the two races in the marriage of Henry I. 4thly. The Plantagenet King derived from a different part of the soil, is, from his local position, interested in other questions than the Norman; yet in relation to his English as well as his French dominions, he carries out the great principle of his race. Either like Henry II. he is asserting the laws of the Crown against the laws of the Clergy, as in the controversy with Thomas à Becket; or, like John, the rights of the Sovereign against the Pope. And when, by surrendering the crown, the king had forsaken this principle, he brings out the nation to assert its rights against himself and the Pope. Under Henry III., by a similar vacillation and bad faith, the necessity is shown of a *permanent* expression of the national mind, in the House of Commons. In Edward I. the King prosecutes a *legal* claim to Wales and Scotland; or in Edward III. a similar claim to France; the same principle is the object of all. Then follows the gradual breaking up of that dynasty and the whole mediæval epoch of English History, from the usurpation of Henry IV. to the union of the two houses in Henry VII., and the total loss of all those foreign possessions during the tenure of which every king from the Norman Conquest was, while a native to one part of his dominions, a foreigner to the rest.

The nation is then drawn round the Tudor king more closely and compactly. His new position and his past experience bring out a new principle, held by all the Sovereigns of this House, but asserted by all in a different way; viz., their Royal Supremacy. It is asserted by Henry VII. against the nobles; by Henry VIII. against the Pope and ecclesiastics; by Elizabeth against both; and even by Mary her sister, against her Protestant subjects. The tendency of the whole policy of the Tudors is domestic; but the love of display in Henry VIII., in Elizabeth the assertion ot nationality against Philip II. caused these sovereigns, even against their will, to interfere in the general politics of Europe.

A different dynasty commences with the Stuarts, ending with the union of Scotland and England; that is the great result to which all is tending throughout the reign of James I. and his successors; and its importance cannot be over-rated. Under the Stuarts the Royal Prerogative is the great point of discussion. Its formal assertion provokes a similar assertion on the part of other bodies in the nation. In the reign of James it affects the Parliament; in the reign of Charles I. every person in Parliament or out of it; Charles II. is not too careless to exercise it on special occasions; James II. makes it subservient to his religious designs. It is limited under William III., and almost forgotten under Anne.

The accession of the House of Hanover brings the nation once more, after a long interval, into closer relations with the Continent; not with France, as in the Norman and Plantagenet eras, but with Germany. At the close of the reign of George the Third, the nation is ruled by ministers who do not put forward the Supremacy, still less the Royal Prerogative, but "court influence." The great reign of this dynasty is that of George III., the great event "the American Independence;" opening the eyes of the nation to a sense of its responsibilities and duties, and securing it from fatal errors which plunged other countries into revolution. We have a more enlightened and philosophical statesmanship from that era, which has preserved to England its national supremacy, and rendered fruitful all past national experience.

To ascertain the true order of events and not to substitute one of his own, the student must adopt some such method as the one just pointed out. He must study the meaning of the great facts in history, endeavour to discover their relation to one another; and perhaps the most feasible method he can pursue, after mastering the great outlines and divisions of his subject, will be to examine the particular reigns of the most remarkable sovereigns, as here suggested.

For ordinary books he may be left to his own discretion; for reference he will find the following useful. For Constitutional History, Hallam's Middle Ages and the Constitutional History of England; for Historical Epochs and their connexion with Geography, Spruner's Atlas or Brewer's Atlas, or some similar works.

In conclusion, though the Examiners have thrown out the foregoing suggestions, they by no means wish to bind any candidate to the method here pointed out. Much must be left to the constitution of every man's mind; and they will endeavour to test every candidate on his own merits, by the care, ability, and faithfulness with which he has worked out his line of study, and not by any preconceived notion of their own.

*N.B. For the year* 1857, *the Examiners will require Candidates to show a fair knowledge of the general outlines of English History, throughout the periods specified in the foregoing report. For the special subject of Examination, they have determined on the Stuart dynasty, from the commencement in* 1605, *to the Restoration in* 1660.

### ROMAN LITERATURE AND LATIN.

The Examiners in Latin and Roman Literature will examine in Cicero's Orations against Catiline, and in the first book of the Æneid of Virgil.

In Roman history they will examine to the end of the Punic wars, or from that date to the death of Augustus Cæsar. The usual text books on these subjects, such as the Histories of Keightley, W. Smith, Schmitz, and those in Gleig's series, will suffice.

### FRENCH.

In the French Language and Literature the Examiner names the following works in which he will examine:—Pascal, Lettres Provinciales; Racine, Britannicus; Molière, le Bourgeois Gentilhomme; Boileau, le Lutrin; C. Delavigne, Louis XI.; Guizot, Histoire de la Civilisation en Europe.

Candidates may take up *any two, but not more than two*, of the above works, and must be ready to answer any grammatical, literary, or historical questions the text may suggest.

In French History the Examiner will require a sketch of the Reigns of Clovis, Charlemagne, Charles VII., Francis I., Henry IV., and Louis XVI.

### DRAWING.

For principles of Freehand Drawing, students should read "Rudimentary Art Instruction, for Artizans and others, and for Schools;" prepared at the request of the Society for the Encouragement of Arts, Manufactures, and Commerce; Freehand Outline, part I. Freehand Outline, part II.—(*Bell and Daldy*).

With reference to Practical Drawing, directly applicable to Carpentry, Iron work, Pattern Making, Machinery, &c., the Examiners will require the Candidate to represent in outline the simple geometrical solids; their elevations, sections, plans and perspective according to the dictation of the Examiner. The following books may be consulted with advantage:—Butler Williams' Treatise on "Geometric Drawing and Perspective." (*Parker*, Strand, 1841). Drawing Vol. II. (*Chambers' Educational Course.*)

GERMAN.

The examiner in German gives the choice of two of the following works:—

Schiller's Maria Stuart, Wallenstein (the three parts), and Geschichte des dreissigjährigen Krieges; Göthe's Egmont and Torquato Tasso; Kugler's Geschichte Friedrich des Grossen.

He would, at the same time, advise the learner to apply, as far as possible, to the study of any of these books the very judicious recommendations given in this paper by the examiners in English literature.

Candidates for a first class certificate will be required to write an Essay on any portion of the works they may have selected, in good German. Those for a second or third class may give their answers in English; but they must be able to translate a piece of easy prose into German.

None need employ the German characters, unless they write them very legibly.

## THE SOULAGE COLLECTION.

(From the *Times*.)

The habitual lounger in our London streets cannot fail to have noticed the great increase which has taken place of late years in the number of old curiosity shops—receptacles for all that world of objects so dear and so familiar to collectors, under the comprehensive designation of *virtu*. From the common old-fashioned teapots which our great grandmothers may have delighted in, and our grandmothers, when children, may have done their best to annihilate, to the groups and vases which may have been treasured up among the princely appendages of the wealthiest Courts of Europe, from Delft to Sèvres—from Rundell and Bridge to Cellini—from the squat old Dutch and Flemish corner cupboards and sideboards which figure in the pictures of Jan Stein and Terburgh, to the finest commodes, secretaires, and gueridons of Boule and Reisner—from the coarsest church lace, wrought by the rustic inmates of poor and out-of-the-way convents in Italy and Spain, to the artful cobwebs of Mechlin, Brussels, and Chantilly—from the punchy green glass goblets, out of which the cavaliers of Palamedes and the boors of Brouwer and Ostade alike continually quaff, to the gilt and enamelled tazze, Vitro di Trino, and latticinio of Venice, specimens of all that has most strenuously exercised the technical ingenuity of the art-workmen of past ages may be found gathered together in such shops by that infallible loadstone, the hope of profit—for acquisition by our wealthy, and for the receipt of admiration from those among us, whose "poverty but not their will consents" to forego the possession and enjoyment of such household gods. Trumpery as the majority of objects comprised within the limits we have sketched may appear at the first glance to the utilitarian, a little further observation and reflection would probably convince him that the eagerness to acquire something superior to common-place and current ugliness in household appurtenances, which now unquestionably obtains among the public, is no unimportant indication of that improvement in demand which can alone lead to permanent improvement in supply. It is utterly vain for teachers to teach, lecturers to lecture, inventors to invent, manufacturers to manufacture, and designers to design a hundred-fold better than they have hitherto done, unless the great mass of the educated public can be brought to show an interest, sympathy, and pride in the results of their efforts. It is a matter of no slight importance that the thousands—and there are thousands—who take their daily lessons in taste from shop windows, should have such shop windows as now swarm in our principal thoroughfares to learn from. If, then, as we believe, much and material improvement is derived in this casual way, and from the observation of such miscellaneous relics of the good taste of our forefathers, how much more must be gained by the thousands who linger, at once amused and instructed, over the treasures of Marlborough House—treasures collected and displayed with a zeal, liberality, and discretion which may be set in exceedingly favourable contrast to the system which has prevailed until very recently in the management of our other national collections? When it is remembered that only five years ago the nucleus of the museum was formed by the expenditure of the grant of only £5,000, under the auspices of a committee appointed by the Treasury; and when it is found at the present date to rival the celebrated Hôtel Cluny of Paris, and far to excel in range of illustration any other public institution of an analogous character in Europe, it may be regarded as a theme for congratulation that so much has been done to retrieve the reputation for a veneration for the beauties of the past, which we, as a people, had well-night lost among the nationalities of Europe. While France had purchased for the instruction of her artists and workmen the Revoil and Du Sommerard Collections, and formed her Musée Ceramique at Sèvres, thereby sowing seed which has brought Paris infinite treasure, and laid the foundation of a rare excellence in art manipulation; while Bavaria could boast her Vereinigten Samlungen; Prussia, her Kunstkammer; Saxony, her Grüne Gewölbe and Zwinger; Austria, her Ambras and Schatzkammer museums—England alone appeared indifferent to the advantages of concentrating for public exhibition the treasures of art workmanship which abounded in the cabinets of her individual connoisseurs.

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It appears some thirty years ago a certain French gentleman, M. Soulage, of Toulouse, was bitten with a mania for collecting objects of beauty in the art-workmanship of the Italian Renaissance—that is to say, such articles as, while ministering to the luxuries of the patricians of the 16th and 17th centuries, should have been wrought in more or less direct imitation of those supposed to have been essential to the enjoyment of the same class under the auspices of Imperial Rome. The moment at which the mania of M. Soulage broke out was a propitious one for its economical indulgence. That terrible time, that *tempo dei Francesi*, which in Italy is made to account for the disappearance of thousands of precious heirlooms, which the fears, or necessities, or cupidity of their proprietors had led them to more or less secretly dispose of, had passed away, just long enough to embolden those into whose hands much miscellaneous plunder of past greatness had fallen, to produce from cellars and garrets fragments of princely magnificence, for their present possession of which they might not very possibly be strictly called to account. To sell to a foreigner who would pay ready money, and at once take away with him, objects marked with the arms and badges of the great families whose descendants were still the influential people of the locality, offered, no doubt, a great temptation to the Italian brokers, and thus M. Soulage was enabled to carry off many a piece of tarnished grandeur enriched by the names of the Malatestas and Gonzagas, the Visconti and the Borgias, the Orsini and the Brancaleoni. His spoils differ in one essential particular from those of the majority of other collectors. With him art was everything, intrinsic value nothing. Including a few gold medals and small articles in silver, his whole series of 790 specimens, if brought to the melting pot, would realise probably little more than as

many shillings, and yet we are assured, on the very competent authorities of Mr. John Webb and Mr. J. C. Robinson, curator of Marlborough-house, the sum of £11,000 is a very moderate estimate of its present market value. Bronze, earthenware, stone, wood, and glass comprise almost the whole series of materials, and the skill of the artist has alone effected the magic transmutation of the whole to gold. This fact should teach no trifling lesson to those who order and value "testimonials" by the number alone of ounces of silver they weigh, or appreciate household furniture alone by the quantity of cube mahogany contained in each piece. Except in the single article of majolica, there is little in common between the Bernal and the Soulage collections; for while the former abounded in miscellaneous objects remarkable only for curiosity, gleaned apparently for the most part between Wardour-street and the Low Countries, the latter is apparently limited to Italian art of the best period of the cinque-cento. The Bernal, with much that was excellent, blended a vast quantity of toys and trifles; the Soulage is for the most part made up of fine large objects, almost every one of which furnishes a model for what might be actually used for household or domestic purposes in the present day.

The unique feature of M. Soulage's accumulations is unquestionably the collection of 106 gold, silver, and bronze medals of illustrious men, for the most part Italians of the 14th, 15th, and 16th centuries. Such medals served for the badges of various families, and were worn in the sleeves, round the necks, or on the hats of gentlemen following the fortunes of a noble house. The best art of the period was invariably employed upon them, and they were modelled, cast, and chased up by men no less skilful than Vittore Pisano (il Pisanello), his scholar Matteo Pasti, Francesco Francia, Pollaiuolo, and Cellini; the latter being among the earliest makers of steel dies to supersede the more troublesome process of casting and finishing up each individual medal separately. Admirable likenesses these medals must have been, for rarely do they fail to express the stamp which history has set upon the characters of men of whose outward semblances time has spared us no other vestige than the record contained in these most interesting medallions.

In money value the richly carved furniture bears away the first place, and it certainly contains many priceless objects. Among the most beautiful are two of those splendid marriage chests immortalized in Rogers's legend of Ginevra. A fireplace ascribed to Alfonso Lombardo, but more probably by one of the Milanese sculptors, is a miracle of stone carving. Among the fifty-one chairs are many of great beauty, and four, enriched with the tarsia, or marquetry, for which Tuscany was early celebrated, and marked with the badge, and are certainly of the period of the renowned Guid' Ubaldo, of Urbino. Strange to say, one of the articles of domestic use upon which the richest carving was most habitually lavished was the bellows. Every collection of importance can display a specimen, but the Soulage has no less than three, and among them the finest known. Another point upon which it takes a strong position is in its possession of a series of original steel mirrors in exquisitely carved frames of the greatest rarity. One, traditionally alleged to have belonged to Lucrezia Borgia, is particularly fine; and others, bearing the badges of the Malatestas and the Viscontis are scarcely less remarkable. The spoils of Doges shine conspicuously, and the great lantern of Gradenigo is a splendid specimen of wood carving.

Next in value to the furniture comes the majolica, that triumph of Italian potters, the favoured ware of the ducal family of Urbino. To the great Maestro Giorgio Andreoli no fewer than fifty pieces are ascribed, and in all the collection comprises, in vases, figure pieces, salts, and dishes, as many as 165 specimens, and among them many by Orazio Fontana and Durantino. On one of the plates is a portrait of Pietro Perugino, executed probably within a short period of his death, and possibly by one of his scholars. The plates with metallic lustre are unusually numerous and fine, in proportion to the whole number of specimens. With the exception of the majolica and of a few excellent specimens of Bernard de Palissy's singular and graceful ware, two good bits of Luca della Robbia's, and a fine vase of Spanish or Majorcan manufacture, the collection contains nothing of great importance in the way of ceramic art.

More valuable even than the pottery, so far as the importance of the practical lessons derivable from it is concerned, is the sumptuous series of bronzes; not that we meet with any of those exquisitely patinated statuettes which rival the purest antique, and which from the days of their original execution connoisseurs have all but poisoned one another in their avidity to possess, but that in quantity and nobility of style the Soulage specimens present us with a true and fair picture of the part that bronze was made to play in architectural and household decoration in the palmiest days of Florence, Padua and Venice; not even the well known "Pisani Neptune Knocker" of the last named city is finer than the magnificent specimen ascribed, with every appearance of probability, to John of Bologna. The firedogs and fireirons from the Brancaleone Palace are full of suggestion, as are other and yet nobler objects of the same kind. Many interesting illustrations in vases and plateaus are brought together of Venetian proficiency in the art of damascening,—an art caught up by the skilful artisans of the "fair city of the sea," from the traditions of Mossoul and Damascus. It is not to be expected that in such a collection the exquisite glass *tazze*, which have made the name of Murano famous for all time, could be omitted. We accordingly find that it includes nearly 100 pieces, of which nineteen are gilt and enamelled; while, as though to complete the picture of a sumptuous apartment in the Palace of a Grimani or a Mocenigo, involuntarily called up to the mind's eye by the profusion of Venetian magnificence scattered about, as from the cornucopia of a Paulo Veronese, there hangs a noble chandelier with glassy flowers of the genuine old stamp. That hangings of right Baudekyn (Baldacchino) may not be wanting to give the true dash of local colour, here we have "stuffs, embroideries, and tapestries, twenty pieces." Our limits bid us hold our hand and brush over, scarcely touching, the swarm of minor branches of art that sue for notice. Here a quaint but tender old picture by Carlo Crivelli, signed and dated 1481, and there a sterner one by Gian Bellini, catch the eye; and again an enamel portrait by that brave artist Leonard Limousin, and worthy "Valet du Roi François Premier," of Tiercelin Laroche du Maine, "Chancelier de France," plaques by the Penicauds, and vases and salts in the graceful *grisaille* of Rexmon and Courtois, make one linger. In fine, the only answer to be given to the question, "What is the Soulage collection?" is that it is a very noble one, and one well worthy of the deep study of all who would see our national art manufactures placed on a footing of equality with those of our honoured allies, the French.

## LIMERICK LACE.

(From the *Limerick Observer*.)

All our readers are aware of the world-wide fame which the exquisite fabric known as "Limerick Lace" has acquired—of its celebrity as a bridal robe, or a ball-room costume in the highest and most fashionable circles; but as very few know the history of its introduction as a staple manufacture in our city, and one which has rendered incalculable benefits, both in a social and moral point of view, to the large number of young females, the children of the operatives, and especially of the labouring classes of Limerick, it may not be out of place here to

advert briefly to its origin, progress, and present position.

The late Charles Walker, Esq., the founder of the establishment, was a native of Oxford, and was educated within the walls of its ancient University, with a view to his entering the church; but his disposition not being suited to the clerical office, and having a strong taste for science and art, he was apprenticed to an engraver and copperplate printer in his native city, a knowledge of whose business he rapidly acquired, and displayed a freedom and richness of style in many of his ornamental designs which at once stamped him as a master of his art. At the expiration of his apprenticeship he went to London, and there made the acquaintance of a family, one of whose daughters, a widow lady, was the owner of an extensive lace factory at Marden Ash, in Essex. This lady Mr. Walker married, and applied himself with great assiduity to the management of the establishment. His refined taste and skill, and his studied regard to correct execution of minute details, were brought to bear in the advancement of the style and finish of the lace work at Marden Ash, and soon obtained for it a preference in the markets.

But the exercise of the genius of Charles Walker was cramped within no narrow centre; it was expansive, and he sought a wider field for calling it into action. He came over to Ireland, and having visited Dublin, Belfast, Cork, and Limerick, he fixed upon Limerick as the scene of his future operations. And here we should not omit to make honourable mention of one whose early acquaintance and intimacy with Mr. Walker on the occasion of his first visit was mainly instrumental in securing for Limerick the advantages it has enjoyed for nearly thirty years by the introduction of the lace manufacture—we allude to James Morgan, Esq., now of Cork, but at that time a highly respectable citizen of Limerick, whose untiring exertions were always directed to the advancement of every project which could tend to raise our city in the social scale, and to promote enterprise and industry wherever a field could be opened for them.

To the inquiring mind of the English capitalist, Mr. Morgan pointed out the facility with which the labour of young females could be obtained here, the comparatively cheap rate at which it could be had, and the readiness with which suitable premises could be obtained. Before Mr. Walker left he became tenant of the large building at Mount-Kennett, which afforded those essential requisites for a manufacturing establishment, namely, ample room, good light, and thorough ventilation.

On the 14th of August, 1829, the "Lace Factory" first opened its portals, and six young girls entered to learn the craft, who thus formed the *nucleus* of its rapidly developing extension and prosperity. We had the opportunity of a conversation a few days since in Mr M'Clure's factory (of which more anon) with the very first girl that ever became a Limerick lace worker, then Margaret Ryan, now the sedate and thrifty matron—"Mrs. Mack." To detail her experience and impressions of what the manufacture of lace has done for the children of the humbler classes in Limerick, would be to go far beyond the bound we propose to confine our present remarks within.

Of the writer's own knowledge, inasmuch as he happens to be somewhat acquainted with the progress of this movement, which commenced a new epoch in the development of the "industrial resources of Ireland," so far as Limerick was concerned, the opening of the factory during the first year was a source of continuous outlay without any recompensing profit to the spirited proprietor. The children had to be *taught* to work. This could not be done except by practising them on pieces of coarse, and frequently of fine lace, with the expenditure of cotton, thread, tackers, rollers, tambour needles, and the various *minutiæ* indispensible for instructing. All this practice work was of course thrown aside, being utterly worthless, though the services of two and twenty young women, skilled teachers in the art of lace embroidery, and four in muslin work, specially brought over from England and paid, boarded and lodged in the factory at Mr. Walker's cost, were employed in bringing the children to that amount of proficiency, which would enable them to do work entitling them to be paid for it. By slow degrees, but sure, the good work prospered; men of note and mark cherished and cheered it on, and that institution which, in its infancy opened with six industrial neophytes, stood forth in its transparent development twenty years after, illustrating the benefits of prosperous enterprise and industry, in the one case to the employer, in the other to the employed. As the girls advanced in proficiency their earnings increased, and the addition which these earnings produced to the income of the working man made more popular and acceptable the new and beneficial employment thus created. Confidence became more extended when it was known that one of the most honoured members of his most honourable and benevolent profession in Limerick or in Ireland (we trust he will pardon this introduction of his name) Dr. William Geary, was the intimate friend of Mr. Walker, and one of the most influential patrons of the establishment.

The girls began to earn respectable wages as soon as they had acquired a competent knowlege of the work; three shillings and sixpence per week was about the average sum they could draw; and as they progressed it amounted to five, six, seven, or eight shillings a week, in many instances equalling, and in some instances exceeding the earnings of the head of the family.

It is well known that in Limerick, labouring men who have profitable employment during a portion of the year, while the provision trade, in curing beef, pork, &c., and in the corn trade, are suspended, remain for a part of the season wholly unemployed; and very many instances have come under our own observation where the wages of the factory girls sustained the family decently, and kept father, mother and children independent of the degrading, though otherwise inevitable medium of pauper relief in the Workhouse. We have not space to adduce many touching instances, but it is a matter beyond question that the extensive employment thus afforded kept together in comfort and hopefulness many happy though humble homes which, but for it, would be in all likelihood cheerless and desolate, and preserved perhaps from moral abandonment the child of many a pure hearted, religious and industrious parent.

Out of Mr. Walker's parent institution sprung many branches, which still continue in prosperous existence. Of these, the establishment carried on by Mr. M'Clure, in Clare-street, is the most extensive, and may be properly set down as the direct successor of the factory, originally commenced by Mr. Walker, with which Mr. M'Clure was connected as manager, for nearly twenty years before Mr. Walker's death. We were recently afforded the opportunity of visiting and inspecting minutely every department of it. It comprises three houses, Nos. 17, 18 and 19, Clare-street, all thrown into one, with direct communication on every floor each with the other. Here were five hundred and fifty young women and girls plying their busy industry, and producing as exquisitely finished work in many branches of lace embroidery as could be shewn from the manufactories of Brussels, Lyons, or Valenciennes. While looking over the rich and delicate fabrics in many of the frames, we recollected an observation made many years ago by Mr. Walker, that "he found the young girls of Limerick to possess a more ready acquirement of doing lace-work correctly and tastefully than in any other part of Europe that he had seen it carried on; and that they could be taught to acquire a perfect knowledge of it in half the time it would take to teach an English girl." From every stage of the process, when the plain net is given out, to its being finished for exportation, all was admirably complete; and in the wareroom where the goods are kept in stock, we saw some magnificent dresses, evincing remarkable taste and richness in design, and great beauty and perfection in the

delicate elaboration of their workmanship. Among some of the most beautiful articles in lace which were shown us were a profusion of lace jackets, now the most fashionable article of ladies' attire in the highest circles. And there were veils and shawls, and sleeves and scarfs, and handkerchiefs, and the endless variety of articles which are indispensable to a lady's wardrobe—all got up with a skill, taste, and perfection for the cultivation and encouragement of which we sincerely trust the spirited proprietor may meet with encouraging support and ample reward.

## ART TREASURES EXHIBITION.

On Wednesday last, Mr. Thomas Fairbairn (chairman) and Mr. Samuel Ashton, of the executive committee, with Mr. George Scharf, the art secretary, had the honour of a lengthened interview with His Royal Highness Prince Albert, at Windsor Castle. A list of the works already obtained was submitted to his Royal Highness; who, after examining it, suggested that certain pictures from the royal collection would be very useful as enabling more complete classification to be effected, and promised that they should be included in the Royal contribution.

The Royal Society of London have authorised the committee to make a selection from their well known gallery of portraits of men distinguished in art and science.

The Committee of the Liverpool Royal Institution have placed the Society's pictures and drawings unreservedly at the disposal of the executive committee.

# Home Correspondence.

## BESSEMER IRON.

SIR,—No practical man, with a grain of common sense, would have expected Bessemer's process to be capable of producing forged iron by casting ingots, as Mr. Gladstone would seem to insinuate in his letter on this subject, inserted in your last number. Cast-wrought, or cast-forged iron, is a solecism in deed as well as in language, but still the fact that Mr. Bessemer has produced puddle iron fit for the rolls or the hammer without the usual puddling process, and without fuel, is clear and undoubted, and quite sufficient therefore to place that gentleman's name in the list of first-class inventors.

It has never been proposed to cast a first-rate anchor from Bessemer ingots, but merely to produce a pure iron, fit for such purposes, by simple and inexpensive means, which would have to go through the rolls, or under the hammer before actual use, like all other puddled iron. Forging or rolling produces a change in the arrangement of the particles which will perhaps ever evade the searching power of chemistry, that is to say, two masses of iron may appear to the chemist identical, but if one be forged and the other cast, there will be a vast difference between them mechanically speaking.

The general tone of Mr. Gladstone's letter is precisely that of the trade; all persons associated with trade and commerce, appear to have a deep-rooted antipathy to all change, down to the mere workman and labourer. When the duty was abolished in the glass trade, did not both workmen and masters combine to defeat the beneficial effect of that measure in regard to the consumers, and would they not have continued to do so had it not been for foreign importations? There will be, as usual, a combination against the Bessemer process, which may be termed a species of fraud upon the consumers, against whose pecuniary interests everlasting war is waged, as a matter of course, by all who are connected with trade.

The Bessemer process is very simple and economical, can be most effectually tested, almost in a few hours, in every foundry and iron mill, and it would have been, therefore, much more reasonable, as well as in better taste, to have caused such trials to be made instead of attempting to write it down. But Mr. Bessemer has an exclusive right, and therein lies all the mischief.

Why did not Mr. Gladstone induce his friends, the iron masters, to make some trial of the process at their large iron works, which would have cost nothing, comparatively speaking, either in time, trouble, or expense, instead of requiring Mr. Bessemer to produce hundreds of tons at his own ruinous cost? No, the ironmasters, like all other tradesmen, will lend themselves to no change in the mode of conducting their operations, until compelled to do so by public opinion, or until the projector shall have been ruined, and his process fraudulently transferred to the public, as was the case with the talented, but unfortunate, Henry Cort.

A perfect sample of cast wrought-iron—I use the phrase though I disapprove of it—was produced by Mr. Fielding, as you may remember, long before Mr. Bessemer's process was publicly known, but the ironmasters set their faces against any such innovation, and decreed most superficially that it was useless, and was besides rendered unnecessary by processes previously known to the trade.

I am, &c.,
HENRY W. REVELEY.

Parkstone, Poole, Dorset, Nov. 3rd, 1856.

## BESSEMER IRON.

SIR,—Much has been done in regard to iron, yet we have much to learn respecting it; especially as to different modes of its manufacture, so as to ensure its strength. Sir Samuel Bentham, at an early part of this century, ascertained that "The great superiority of strength which may be given to metals by hammering or rolling, has been ascertained beyond a doubt—that the best Swedes iron may, by hammering, be increased about a seventh in strength—that though the best Swedes iron so hardened, broke with seven tons and a-half, English copper rolled sustained six tons before it broke; and, what is very important, that one of the mixtures of metal used in the metal mills, bore a weight of five ton seven cwt. and a half before it broke."* But this does not appear to hold good when large masses of the metal are operated upon. Hence, it has been found, that anchors, when hammered, became hard and tough as steel on the surface, but granulated like cast-iron within. Mr. Nasmyth failed in his manufacture of a large piece of ordnance, though the hammer used by him was proportionably heavy, its strokes being heard at a distance of half-a-mile. Another piece of ordnance, since manufactured, was found to have its interior as soft as plumbago. It is one of a smaller bore that has lately been found efficacious, as I learn from an eye-witness—hence the old method of making large guns has been resorted to—namely, that of connecting small bars together by hoops. The portion of Bessemer's iron, noticed in the *Journal of the Society of Arts*, which proved so strong, was rolled, thus confirming the idea that crystallisation was destroyed by rolling. Sir Charles Trevelyan proposed in your pages that iron should, like wood, be as it were laminated, though this might not be expedient, for the reasons he stated, yet on other accounts it seems advisable.

The conclusion to be deduced from the above is, that further experiments are needed for ascertaining the most desirable process for manufacturing iron in large masses.

I am, &c.,
M. S. BENTHAM.

26, Wilton-place, Nov. 3rd.

# Proceedings of Institutions.

BUCKS AND BERKS.—The Bucks and Berks Lecturers' Association, desirous of encouraging to the utmost of its

* Statement of Services, page 171.

power, adult education, offers to the Institutes, reading and class rooms in union with it, the following inducements to persevere in the formation and maintenance of evening classes. A gratuity of £2 to the Institute or reading room with the greatest number of pupils for classes, (in proportion to the number of its members,) during the season of 1856 and 1857. A gratuity of £2 to the class whose members, during the same time, have been most regular in their attendance. No pupil to be counted, who has attended less than four times a month, or who is not engaged in earning his livelihood. A present of books to the value of £1 to the pupil who has attended his class with the greatest regularity. A public examination in Mathematics, Geography, History, English Language, and Literature, will be held in Windsor, in the spring of 1857, for members of Institutes, Reading, or Class Rooms, in union with the association, when prizes will be awarded, of the respective values of £3, £2, and £1, accompanied by the certificate of merit of the association. If successful candidates intend afterwards offering themselves for the examination of the Society of Arts, the prizes will be given them in money, (should they desire it,) to help to defray their expenses. Prizes, to the value of ten shillings each, will be given for the best executed map of Europe, and the best plan of a locomotive steam-engine.

MANCHESTER.—The Right Hon. Sir John Pakington has consented to address the members of the Manchester Athenæum, on the 18th inst., on the subject of national education.

PORTSMOUTH AND PORTSEA.—The recently published report of the Literary and Philosophical Society states, that during the past year there has been a considerable increase in the number of members; but, notwithstanding this, the attendance in the lecture-room has not exceeded the usual average; the experience of each successive year strengthens the conviction that with the system of desultory lectures the public mind has ceased to sympathise. The weekly lectures have rendered essential service by diffusing information and awakening inquiry; but they have not proved sufficiently effective as the basis of Adult Education: the results have not been proportional to the capabilities of the machinery in action; the work has been superficially executed; the Society, in order to preserve that degree of respect to which its designation entitles it, must direct its most strenuous exertions to increase the proportion of members who are able to appreciate a truly scientific discussion. The committee feeling the necessity for the introduction of some change in the proceedings, submitted to a general meeting a proposition, the practical effect of which was to confer on the committee of management authority to admit non-members to special courses of lectures on the payment of a specified fee; this proposition was unanimously adopted. During the past year the Society of Arts has organised a system of examinations for the students in classes connected with the Institutions in Union. This important movement has been termed the great event of the session, and it is destined to exert a healthful and invigorating influence upon the proceedings of the associated Institutions. The committee earnestly recommend the Society to consider the practicability of so far extending its operations as to admit a class of students who may desire to become candidates for the examinations, and to compete for the prizes. Since the last anniversary the Society has entered into union with the Hants and Wilts Adult Educational Society, and has thereby become entitled to the privilege of selection from their published list of gratuitous lectures, and to the free use of the diagrams and apparatus in the possession of the Educational Society. An Exhibition of Works of Art was held in the Museum, and nearly 150 valuable oil paintings, thirteen water colour copies of pictures in the Queen's collection, four stereoscopes with a great variety of slides, several interesting figures and statuettes in bronze, Parian, and terra-cotta were exhibited. The opening soirée was held on Friday, June the 27th, on which occasion Dr. Engledue delivered a lecture on the Oxy-hydrogen Microscope; several soirées have been subsequently held, a lecture on Philosophical Experiments, illustrating some branch of science, usually forming a part of the arrangements. 857 tickets were issued for the various soirées; 557 for the inspection of the pictures; the general total being 1414.

ROYSTON.—On Wednesday, 29th October, a lecture on New Zealand was delivered at the Institute by T. S. Forsaith, Esq., late Member of the House of Representatives. The lecturer related the story of his life in New Zealand, commencing with his first journey on that land. He gave a brief historical sketch of the past, and took a survey of the present condition of these islands. Mr. Forsaith having resided nearly twenty years in New Zealand, his observations were the result of great experience. He is about to return to his home at Auckland, in the land of his adoption. The lecture was made more interesting through the exhibition of some beautiful coloured sketches, of large size, showing, among others, "The Settler's First Home" and "The Settler's Present Home." The lecture gave great satisfaction to a large audience.

WINDSOR AND ETON.—The third lecture of the present session was delivered on Wednesday, October 15th, at the Literary, Scientific, and Mechanics' Institution, by the Rev. G. G. P. Glossop, M.A. The subject was Printing, chiefly with relation to the anastatic process. The chair was taken by the Rev. W. C. Bromehead. A large number of members, with their friends, mustered, and well filled the hall. The rev. lecturer began by giving a definition of printing, which, he said, consisted of the production of copies of a certain object by means of a surface in relief, ink, and pressure. The so-called photographic printing, as at present performed, cannot really be said to be printing, as light is the means employed for taking copies. It is supposed that the first idea of printing is coeval with the building of Babylon, many bricks found in its supposed site being printed or impressed. The Romans may be said to have been printers, articles of their manufacture being found with brands on them, in the same way that spades and tools are branded now. Printing from blocks cut in relief is supposed to have been first practised in China, 50 years before Christ, and the same method is employed there at the present day. The first application of printing in Europe seems to have been for the production of religious prints and playing cards, and the first important step in the art was the employment of small blocks and moveable type, instead of the whole page blocks. Another improvement was the introduction of line engraving in taking maps, copies of pictures, &c. This derived its origin from the plan of the goldsmiths and jewellers of the middle ages, who, in order to see how their designs looked while being chased out, filled the cut away surface with ink, and then obtained a reversed fac-simile of the work on paper. The lecturer then proceeded to show what printing had done for mankind during the 400 years it had been in use—the increase of religion, spread of knowledge, the dissipation of error, the comforts of life, in the arts of peace, trade, even in those of war, in the production of books and music, in the pictorial, decorative, and manufacturing arts. The anastatic process was then fully described, and the patentee, who was present with his apparatus, proceeded, by way of illustration, to print off several copies from a wood-cut in *Punch*, which were afterwards distributed among the ladies present. The numerous uses of this process, its many advantages over other methods, its accuracy, applicability, and cheapness were dwelt upon. The evil attending this, like other benefits, namely, the facility it offers for committing forgeries, was alluded to, and the patentee described a plan by which paper could be so prepared that it should be impossible to take copies of bank notes, cheques, and other important papers. Various

other kinds of printing were then referred to, the methods employed described, and the advantages or disadvantages attending each dwelt upon. Typography, or common printing, being so well known, was only alluded to. Copper and steel plate engraving, etching, wood engraving or cutting, stereotypes from wood blocks, lithography, chromo-lithography, or printing in colours, and nature printing, were all fully described, and a plan now in course of being carried out for actual printing from photographic plates, was alluded to. The lecture was very interesting and instructive, and the exhibition of the anastatic press and process, a large number of engravings, plain and tinted lithographs, specimens of nature printing, &c., added much to its attractiveness.

YARMOUTH.—The annual meeting of the Parochial Library and Museum, was held in the Priory Library, on the 24th ult. There was a large attendance of members. The Rev. G. Hills, B.D., in the chair. The Chairman observed that they were met together, in accordance with annual custom, at the anniversary of the Parochial Library and Museum, and he believed they would say, when they heard the report, that they had met under circumstances more favourable than at any period since the formation of the society. They were all aware that there were certain great objects for which the Institution was founded, and their endeavour would be to keep those objects in view, and carry them out to their accomplishment. They lived in an age of great educational progress, and one of the circumstances that marked that progress was the facilities afforded for self-improvement and pleasure from knowledge; and that Institution was a part of the great educational progress that was being carried forward, and they endeavoured there to take their part in the great movement which characterised the age. But they not only wished to join in that educational progress, but they desired as well to connect it with that which was pure, and lovely, and true, and hence it was that they took care not to allow it to sink down into pursuits of a lower taste. They, no doubt, at times felt that some of the subjects were dry, and others tedious, but they should continually remind themselves that in such work there must necessarily be a certain amount of what was dry, and that they must go through the drudgery to reap the fruits and pleasures of knowledge; and every man who desired to excel, no matter whether it was in business, or knowledge, or science, must expect to experience a certain amount of toil, anxiety, and labour; and that was the argument by which he would meet the objections that were made to institutions of this kind, that the lectures were not always of an amusing character. They had endeavoured to combine all that was really useful with much that was instructive and amusing, and when they looked back upon the attendances at their lectures during the past year, and the money that had flown into their exchequer, it would prove that they had met the tastes of a large part of the community. He would also urge upon those young persons who were present not to be led away by what was light, to the exclusion of that which was of more solid worth. He considered that at the present day even some of the dry work was made much pleasanter than it used to be. It often struck him that school must be a much pleasanter place than it used to be. He could hear shouts of laughter and all sorts of fun sometimes an hour before school began, and he looked out and saw things looking almost like monkies, climbing up the gymnastic poles, and he found they were boys who had come before the school commenced. At one time, according to the poet, it used to be—

> The whining school-boy with his satchel,
> And shining morning face, creeping, like snail,
> Unwillingly to school.

And if their schools, under such excellent teachers as Mr. Hewke, Mr. Brand, and Mr. Harding, were such happy places, that Institution, in carrying out the higher branches in their college, so to speak, for really they were approaching the dimensions of a college, endeavoured to combine recreation with that which was solid and useful. It had, therefore, been arranged that in the present session they should have musical evenings, under the direction of Mr. Stonex, and from that they would derive pleasure; for they were to remember that the poet also said,—

> The man that hath no music in his soul,
> That is not moved with concord of sweet sounds,
> Is fit for treasons, stratagems, and spoils;
> The motions of his spirit are dull as night,
> And his affections dark as Erebus:
> Let no such man be trusted.

They kept those two objects in view: to promote the improvement of the mind, and to make it as cheerful and happy as they could. They would hear from the report that, during the past year, their efforts had been successful, and he doubted not that, with the blessing of God, they would still go on increasing in usefulness. The rev. gentleman concluded by calling on the hon. secretary to read the report. The Rev. F. W. JOHNSON read the report, from which it appeared that the number of members in 1855 was 255; and in 1856, 320. Many standard works had been added to the Library. The reading-room had been well attended. The attendance at the lectures had been more numerous than in former years. The Library at present contains 2,628 volumes, being an increase of 202 volumes since October, 1855. The number of volumes issued to subscribers had been 5,900, and with the book club circulation of 4,680 volumes, gave a total issue of 10,580 books, besides the books that were used every evening in the Reading-room. The committee looked to the classes lately opened as a powerful means of improving the young members of the institution, and fitting them for situations under government, or in large commercial firms. During the winter months, free instruction was given as usual in reading, writing, and arithmetic, to 100 male adults, and considerable improvement was visible. The Militia schools were conducted at the same time and under the same superintendence as the evening classes. The French class numbered 22 pupils, and was being continued under the superintendence of Mons. Vincent. The anniversary of the institution was celebrated by a literary and scientific entertainment, at which 1,500 tickets were issued. Mr. R. H. PALGRAVE (in the absence of Mr. T. Brightwen) read the financial statement, from which it appeared that the finances of the Society were also in a flourishing state, the total income being £213 17s. 8d. The expenditure had been £163 11s. 7d., leaving a balance in hand of £50 6s. 1d. The Rev. G. F. SLADE moved that the report and financial statement be adopted and printed for circulation amongst the members. Mr. W. S. JOHNSON seconded the resolution, which was carried unanimously. The following gentlemen were elected on the Committee:—Mr. Morant, Mr. E. R. Aldred, Mr. Steward, and Mr. Stonex. Mr. GOODWIN said, he had hoped that some suggestion would have emanated from the Society, with the view of calling the attention of the tradesmen and the public to the desirability of closing the shops earlier of an evening. He himself, with many others, was prevented attending the classes, by the system of keeping open the shops late in the evening. The CHAIRMAN remarked that he had taken much interest in the subject; he had given a lecture, and set forth in the best way he could, the desirability of early closing. He should be glad to see that Institution take up the subject with the view of settling the question, and to carry it out in a manner that would be satisfactory to both employers and employed. Lowestoft and Lynn, and other towns near them, had agreed to close at seven o'clock, and he hoped they would do so in Yarmouth. After some discussion as to the best mode to be adopted to carry out the object in view, Mr. LUPSON moved, and Mr. HARDING seconded, "That this meeting deeply deplores the system of late hours in trade, feeling it to be injurious to the health, the mental and social good of the young persons engaged in it."—Carried. Mr. GOODWIN moved, and Mr. MANN

seconded, "That a committee be formed for the purpose of carrying out the foregoing resolution, and of waiting upon the different tradesmen with the view of obtaining the closing of shops at seven o'clock, on and after the 3rd of November."—Carried. Mr. LAWS moved a vote of thanks to the Rev. F.W. Johnson, the honorary secretary, which was seconded by Mr. M. J. PRATT, and carried unanimously. The Rev. F.W. JOHNSON acknowledged the compliment, and observed that in conjunction with the other honorary secretary, Mr. R. H. Horner, they would continue to do their best for the interests of the Institution. Mr. HEWKE moved a vote of thanks to the chairman, which was carried by acclamation, and the meeting broke up. Classes have been opened on the following subjects, and some of them are very numerously attended:—Church History of England; English History and Constitution; English Literature and Composition, and Writing from Dictation; Roman History and Latin; Navigation; Mathematics and Book Keeping; Short-hand; French; Vocal Music (Hullah system).

## MEETINGS FOR THE ENSUING WEEK.

MON. Geographical, 8½. I. "Proceedings of the North Australian Expedition, under Mr. A. G. Gregory." II. Mr. A. R. Wallace, "Notes of a Journey up the Sadong River, Borneo." III. Lieut. De Crespigny, "Proposed Exploration of Borneo."

TUES. Syro Egyptian, 7½. Mr. Bonomi, "On the Metaphorical Sculptures of Egypt."
Civil Engineers, 8.
Zoological, 9.

## PATENT LAW AMENDMENT ACT.

APPLICATIONS FOR PATENTS AND PROTECTION ALLOWED.

[*From Gazette, October 31st*, 1856.]

*Dated 3rd September*, 1856.

2044. Jean Baptiste Marcelin Jobard, Directeur du Musée de l'Industrie Belge a Bruxelles—Improvements in the manufacture of lamps.

*Dated 17th September*, 1856.

2178. Alfred Lodwick Newman, New Church-street, Bermondsey—Improvements in processes for separating animal from vegetable fibre, and for adapting the products to manufacturing purposes, and in the machinery employed therein.

*Dated 19th September*, 1856.

2199. Amos Hustler, Bradford—Improvements in looms for weaving.

*Dated 27th September*, 1856.

2265. David Law and John Inglis, Glasgow—Improvements in moulding or shaping metals.

*Dated 2nd October*, 1856.

2313. Michael Thomas Crofton, Leeds—An apparatus for indicating and registering the number of persons entering a public vehicle or carriage.

*Dated 3rd October*, 1856.

2316. John Hall, jun., Mount Pleasant, Walmersley, near Bury, Lancashire—Improvements in looms.

*Dated 6th October*, 1856.

2333. John Gedge, 4, Wellington-street South, Strand—Improvements in the preparation of rocky substances for obtaining mineral manure. (A communication.)

2335. Andrew Dunlop, Glasgow—Improvements in dressing or sifting flour or meal.

2337. Victor Avril, Paris—Improvements in the manufacture of iron and steel, and in the construction of furnaces to be employed therein, also in the obtaining of a certain agent employed in such manufacture.

*Dated 7th October*, 1856.

2339. Thomas Briggs Smith, Taunton, Massachusetts—Improvements in the permanent way of railways, and in the running of railway carriages.

2341. William Nehemiah Parsson, Southwark-bridge-road—An improved construction of rotary sawing machine.

2343. James Hinks, Birmingham—A new or improved manufacture of metal boxes.

2345. William Wilkinson, Nottingham—Improvements in ornamenting glass, and in the preparation of the materials employed therein.

2347. Jules Adolphe Le Franc, Cecil-street, Strand—An improvement in lubricating oil cans or vessels. (A communication.)

2349. William Marriott and David Sugden, Huddersfield—An improvement in purifying coal gas.

*Dated 8th October*, 1856.

2351. James Chiosso, Camden-town—An apparatus for damping and affixing adhesive stamps and labels.

2353. Edmund Alfred Pontifex, Shoe-lane, and George Henry Ogston, Greenwich—Improvements in the manufacture of tartaric and citric acids.

2355. John Leigh, Manchester—The use or application of a certain substance or substances in the manufacture of paper for stiffening and sizing the same.

2357. Thomas Dugdale, jun., Blackburn, Lancashire—An improved lubricator.

2359. Peter Ward, Liverpool—An improved composition for coating the bottoms of ships.

2361. Charles Iles, Birmingham—Improvements in frames and stands, and in suspendors, or pegs for holding or suspending hats, coats, and other articles.

*Dated 9th October*, 1856.

2365. James Atkinson Longridge, Fludyer-street, Westminster, and Thomas Richardson, Newcastle-upon-Tyne—An improvement in constructing the fire boxes of locomotive steam boilers.

2367. Charles Burton, Regent-street—Improvements in machinery for washing and cleansing fabrics and clothes.

2369. Joseph Bennett Howell, Sheffield—Improvements in the manufacture of cast-steel.

2371. Lewis Jacob Jordan, Berners-street—A medicine for the cure of venereal affections.

*Dated 10th October*, 1856.

2373. Jean Alexandre Labat, junr., Bordeaux—Improvements in closing or stoppering bottles, jars, and other like vessels.

2375. Christopher Richard Norris Palmer, Southampton—A signalizing apparatus for carriages, and improved telegraph or signal apparatus, applicable to other purposes.

2377. William Johnson, 47, Lincoln's-inn-fields—Improvements in the manufacture of fulminating powder. (A communication.)

2379. John McInnes, Liverpool—An improved surface mineral coating for protecting iron and other substances, and an improved vehicle or varnish by which it is applied, and which varnish may be used with or without the addition of other substances.

2381. Robert McConnell and Alexander Mackenzie, Glasgow—Improvements in supplying steam boilers with water, part of which improvements or modifications thereof are applicable for the transmission of fluids and the indication of fluid levels under pressure.

*Dated 11th October*, 1856.

2383. William Hindle Ashburn and James Fairhurst, Blackburn—Improvements in machinery or apparatus used in the preparation of cotton or other fibrous substances for spinning.

2387. James Latham, Liverpool—Registering the number of passengers by omnibuses and other vehicles and conveyances.

2389. George William Varnell, Royal Veterinary College, Camden-town—Improvements in mounting troughs, mangers, and apparatus used for feeding horses and other animals.

2391. Léopold Ador, and Edouard Abbadie, Paris—Improvements in the manufacture of colours from metals, and in the furnaces or apparatus for the same.

*Dated 13th October*, 1856.

2393. Charles Sidney Johns, Barnard's-inn, Holborn—Improvements in machinery or apparatus for preparing pulp suitable for the manufacture of paper.

2395. Benjamin Kisch, Kennington—An apparatus for containing an arrangement of cards or papers for selection. (A communication.)

2397. Giovanni Battista Piatti, Genoa—Improvements in the production of ice.

2399. John Stephen, Glasgow—Improvements in steam boilers and furnaces.

*Dated 14th October*, 1856.

2403. Richard Archibald Brooman, 166, Fleet-street—An improved method of, and composition for, splitting or rending rock, stone, and earth. (A communication.)

2405. Thomas Allen, Clifton—An improvement in the manufacture of iron and other metallic bedsteads.

*Dated 15th October*, 1856.

2409. James Burrows, Wigan, Lancashire—An improved arrangement of apparatus employed in winding coals or other minerals from mines, which said improvement is also applicable for other similar purposes.

2411. Archibald Turner and Luke Turner, Leicester—An improved manufacture of elastic fabrics.

2413. George Hazeldine, Lant-street, Southwark—Improvements in carriages requiring 'poles' between the horses or draught animals.

*Dated 16th October*, 1856.

2414. George Collier, Halifax—Improvements in the manufacture of piled fabrics.

2415. Alfred Tooth, 14, Mincing-lane—An improved process for bleaching malt, whereby the colour is rendered more suitable for the brewing of pale or bright malt liquors.

2416. Carl Johan Laurentz Leffler, Old Broad-street—Improved apparatus for the casting of metals.

2417. Richard Ford Sturges, Birmingham—A new or improved manufacture of rollers or cylinders for printing fabrics.

*Dated October 17th*, 1856.

2418. Charles Napoleon Wilcox, Islington—Improvements in the preparation and application of certain vegetable matters to be used in toilette soaps, pomades, and other like perfumery.

2419. Edward Tombs, Islington—An improvement in screw propelling.

2420. Joseph Commandeur, Lyons—A mechanical apparatus for regenerating the impulsive force of any motive power.

2421. Ferdinando Foggi, 24, Southampton-place, New-road—Improvements in the manufacture of engines driven by steam or other vapour.

2422. John Green, 27, Charlotte-street, Portland-place, Marylebone —An improved cooking apparatus.
2423. Ebenezer Rogers, Abercarn, Monmouthshire—Improvements in apparatus for the decomposition and combustion of fuel.
2424. Jane Elizabeth Reed, Southgate, Middlesex—A mixture or compound for the cure of asthma, consumption, and other affections of the chest or lungs.
2425. Peter Armand le Comte de Fontaine-moreau, 39, Rue de l'Echiquier, Paris—Certain improvements in the construction of turbines. (A communication.)
2426. Peter Armand le Comte de Fontaine-moreau, 39, Rue de l'Echiquier, Paris—An improved process for purifying brandies and other alcoholic products. (A communication.)
2427. William Dray, Swan-lane—An improved method of and apparatuses to be employed in the stacking or storing of corn and other agricultural and horticultural produce.
2429. William Jeffrey, Glasgow, N.B.—Improvements in machinery or apparatus for sawing or cutting wood.
2430. John McDowall, Johnstone, Renfrewshire—Improvements in sawing or cutting wood.
2431. Napoleon Brécheux, Paris—Improvements in looking-glasses applicable especially for dressing rooms and for other purposes.
2432. George Morton, Keighly, Yorkshire—Improvements in escapements for chronometers and other time-keepers.
2433. Thomas Frederick Henley, Bromley — The employment of certain substances not hitherto made use of, for the production of alcoholic spirits, and for the manufacturing of the same, the refuse material being applicable as a food for cattle.
2434. Alfred Vincent Newton, 66, Chancery-lane—Improvements in the manufacture of tufted pile fabrics. (A communication.)
2435. William Gossage, Widness, Lancashire—Improvements in the manufacture of coal-gas used for illuminating purposes.
2436. John Smith, Kirtley, Suffolk—Improvements in heating the feed-water of steam boilers for marine and land purposes.
2437. Samuel Cunliffe Lister and William Tongue, Bradford, Yorkshire—Improvements in spinning.
2438. James Robert France, Clarence-street, Islington — Improvements in electric telegraph apparatus
1439. Frederick Arthur Magnay, Taverham Mills, near Norwich, and Ralph Radcliffe Whitehead, Royal George Mills, Saddleworth—Improvements in damping paper for printing.
2440. William Palmer, jun., Sutton-street, Clerkenwell—Improvements in roof candle-lamps for railway and other carriages.
2441. Thomas Lawes, 32, City-road—An improved construction of agricultural implement to be used in tilling the land.

*Dated October 18th, 1856.*

2442. Robert Hanham Collyer, M.D., 3, Park-road, Regent's-park—Improved method of manufacturing paper.
2443. Leon Joseph Pomme de Mirimonde, Paris—Certain improvements in reducing the friction of axles and axeltrees of carriages on railways.
2444. Isidore Delcambre, Paris—Improvements in machines for composing and distributing type.
2445. Joseph George, 39, Rue de l'Echiquier, Paris—An improved crane.
2446. Jacques Felix Deshayes, Paris—Improvements in machinery for dyeing silk, cotton, or wool in hanks or skeins, or woven fabrics.
2447. Henry Brown, Halifax—An improvement in spinning worsted.
2448. Thomas Flockton, 4, Trafalgar-square, Charing-cross—Improvements in the consumption of smoke.
2449. Charles Humfrey, 14, The Terrace, Camberwell—Improvements in the manufacture of grease for lubricating railway axles and other machinery.

*Dated October 20th, 1856.*

2450. Joseph Harrison, Blackburn, Lancashire—Improvements in machinery for warping yarns, parts of which improvements are applicable to creels used for other purposes.
2451. Sir Francis Charles Knowles, Bart., Lower Hill, Berkshire —Improvements in the manufacture of iron and steel, and in the preparation of fuel used therein.
2452. Richard Archibald Brooman, 166, Fleet-street—Improvements in farthingales or petticoats. (A communication.)
2453. Léon Philéas Huteau, 39, Rue de l'Echiquier, Paris—An improved petticoat.
2454. James Young, South Shields, Durham—An improved ventilator.
2456. Joseph Lacassagne and Rodolphe Thiers, Lyons—An improved electric lamp.
2457. John Thomas Forster, Wandsworth-road, Surrey—Improvements in the symbols used in signalling.
2458. Josiah George Jennings, Holland-street, Blackfriars—Improvements in the construction of wall caps, sleeper blocks for the basements of buildings, and bricks to be used as substitutes for wood bricks in building.
2460. Anthony Lorimer, Bedford-square East, Commercial-road—An improvement in reworking vulcanized india rubber.
2461. William Parsons, Pratt-street, Lambeth—Improvements in generating and employing steam in steam engines.
2462. Henry Deacon, Hans-place, Chelsea—Improvements in suspending carriage bodies.
2463. William Clay, Liverpool, and Josiah Harris, Dolgelly, Merionethshire—Improvements in the manufacture of iron and steel.

*Dated October 21st, 1856.*

2465. Henry Thompson, Great Harwood, near Blackburn, Lancashire, and Thomas Curtis, Blackburn—Improvements in the manufacture of healds or heddles.
2467. George Blair, Leicester—Improvements in the manufacture of looped fabrics.
2469. Spencer Smith, Soho—Certain improvements in furnaces.
2471. John Shaw, Britannia Iron Works, Neithrop, Banbury—Improvements in preparing the food of cattle.
2473. Edward Orange Wildman Whitehouse, London, and Joseph Christopher Laws, Brighton—Improvements in tools for soldering metals.
2475. Hugh Lee Pattinson, Scots House, near West Boldon, Durham—Improvements in the treatment of certain salts and oxides of manganese.
2477. Alfred Vincent Newton, 66, Chancery-lane—An improvement applicable to the reefing, furling, and unfurling of sails. (A communication.)

## WEEKLY LIST OF PATENTS SEALED.

*Sealed November 1st, 1856.*

1042. William Naylor.
1054. Wright Garside.
1061. Amedée Louis Beudant and Jean Louis Marie Paul Benoit.
1062. Obed Blake.
1089. Alfred Vincent Newton.
1131. Henry Bragg.
1139. Gustavus Palmer Harding.
1155. Samuel Weston Moore.
1169. Alfred Vincent Newton.
1193. William Cardwell McBride.
1217. William Galloway and John Galloway.
1221. Wm. Churchill Dempsey.
1255. Charles Cowper.
1269. Frederick Peter Dimpfel.
1297. Henry Cartwright.
1338. John Betts.
1361. Alexander Robertson.
1381. Alfred Vincent Newton.
1563. John Pendlebury.
1634. Charles William Lancaster.
1685. Ebenezer Seymour.
1767. William Wood.
1899. Edward Hallen and William Holland Kingston.
1928. John Stopporton.
2011. Edward Poitiers.
2055. George Alfred Lewis.

*Sealed November 4th, 1856.*

1071. William Joseph Curtis.
1072. Ralph Heaton, jun., Harry Heaton, and Geo. Heaton.
1079. Alexander Ebenezer Riddle and Isaac Hoare Boyd.
1090. Stephen Walter Underhill.
1095. Ferdinand Potts and Thomas Vann.
1117. Edouard Besnier de la Pontonerie.
1132. William Galloway and John Galloway.
1133. Hiram Groves.
1143. William Crofts.
1160. Joseph Martin.
1180. Jeremiah Brown.
1194. Alfred Vincent Newton.
1197. Joseph Henry Reynell de Castro.
1207. George Heron.
1230. Samuel Berrisford and Enoch Wilkinson.
1242. John de Cockkenieck.
1248. Frederick Peter Dimpfel.
1286. Francis Alton Calvert.
1287. Alfred Watson and Alfred Hamlyn Williams.
1336. William Smith.
1730. Samuel Colman.
1744. William Webster.
1809. William Edward Newton.
1875. William Webster.
1906. John Goddard and George Hulme.
1946. Charles Clark.
1989. James Earl of Caithness.
2070. Robert Wilson.
2117. William Webster.
2119. William Oldham.

## PATENTS ON WHICH THE THIRD YEAR'S STAMP DUTY HAS BEEN PAID

*October 28th.*

2573. Charles Carr and William Kyle Horsley.
2591. Humphrey Chamberlain.

*October 29th.*

2521. John Crowley.
2545. Richard Edward Hodges.
2552. Bryan Edward Duppa.

*October 30th.*

2508. Joseph Haley.
2514. George Hamilton.
2515. Anthony Park Coubrough.
2528. James Chesterman.

*October 31st.*

2524. Mark Newton.
2543. Henry Brierly.
2549. John Moffat.

*November 1st.*

2578. Edwin Kesterton.

## WEEKLY LIST OF DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

| No. in the Register. | Date of Registration. | Title. | Proprietors' Name. | Address. |
|---|---|---|---|---|
| 3895 | Oct. 30. | Improved Weft Fork | James and Eli Gleave | Stockport. |
| 3896 | ,, 31. | Improved Turnip Cutter | G. Wood and Son | Chelmsford. |
| 3897 | ,, —. | Lever Table Catch | Cope and Collinson | Birmingham and Oxford. |
| 3898 | Nov. 3. | Improved Water Closet | John Walker | Doncaster. |
| 3899 | ,, 4. | Safety Pocket Protector | Thomas Octavius Jones and Stopford Jones | 33, Newgate-strset, City. |
| 3900 | ,, —. | Bracelet and Necklet Fastening | William Russ | 27, Gloucester-street, Clerkenwell. |